METHOD AND APPARATUS FOR REDUCING GAS TURBINE ENGINE EMISSIONS

ABSTRACT

[0050] A low emission turbine includes a reverse flow can-type combustor that generally includes a primary and secondary fuel delivery system that can be independently controlled to produce low CO, UHC, and NOx emissions at design set point and at conditions other than design set point. The reverse flow can-type combustor generally includes an annularly arranged array of swirler and mixer assemblies within the combustor, wherein each swirler and mixer in the array includes a primary and secondary fuel delivery system that can be independently controlled. Also disclosed herein is a can-type combustor that includes fluid passageways that perpendicularly impinge the backside of a heat shield. Processes for operating the can-type combustors are also disclosed.